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Coconino National Forest

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Introduction and Forest Supervisor Certification

This report provides monitoring information for fiscal year 2015 (FY15), as required by the Coconino National Forest's amended 1987 Land and Resource Management Plan (Forest Plan). The intent of the monitoring and evaluation report is to inform the decision maker and the public of progress toward achieving the goals, objectives, and standards and guidelines.

The information provided in this report follows Table 14 in Chapter 5: Monitoring Schedule of the Forest Plan. Monitoring items that have changed or are no longer relevant are noted where they apply.

I have reviewed the Coconino National Forest's Monitoring and Evaluation Report for FY15. This Monitoring and Evaluation Report meets regulatory requirements for completing an annual report. Amendments or revisions to the Forest Plan are not likely to be made as a result of this report. Instead, information from this report will be used in the Coconino National Forest Plan revision process currently underway.

Laura Jo West

Forest Supervisor



Recreation

RECREATION Items Monitored	Intent	Monitoring Method	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
items Monitored	Intent	(Unit of Measure)	Wieasuring Frequency	riscar Tear 2013 (F 113) Reporting information
Developed Site Use	Determine recreation use and demand.	Recreation Information Management (RIM) system use reports/Recreation Visitor Days (RVD's)	Annually	The RIM system has been replaced by the National Visitor Use Monitoring (NVUM), which provides day, overnight, general forest area, trail and wilderness use based on user surveys at these locations throughout the forest. The new measure is national forest visits. NVUM is completed on a 5 year cycle. The Coconino NF has data from 3 cycles: 2000, 2005, and 2010. NVUM showed a decrease in national forest visits from 2005 to 2010. Day use and general forest area use declined, but wilderness visits increased. The forest completed 330 surveys for NVUM in 2015. Results will be available in FY 2016 and will be compared to the previous data.
Developed Site Condition	Prevent damage and deterioration. Meet health and safety requirements	RIM system facility condition reports, project reviews/facilities by RIM maintenance class	Annually	The RIM system has been replaced by site condition surveys that are completed on a 5 year cycle. All sites are current. Site upgrades are very limited now. Enhancement fees allow some facility upgrades or improvements to meet visitor service needs. Dry Creek Vista and Fay Canyon Trailhead have amenity improvements and are proposed for inclusion in the Red Rock Pass Program (RRP). Facilities in the RRP receive regular maintenance as fees are reinvested into the sites. Granger-Thye fee offset dollars from concessionaire permits also provide funding for maintenance projects. Emergency repairs are spread over several years. There are often increased costs with providing temporary facilities (such as portable toilets). Progress in decreasing deferred maintenance has slowed to almost none. Operation and maintenance of sites continues, but not all maintenance can be accomplished resulting in additional deferred maintenance.
Implementation of Recreation Opportunity Spectrum (ROS) Guidelines	Ensure the protection of existing ROS classes.	Review project work plans involving vegetative treatment, road/trail construction, or major development/acres by ROS class.	Annually	ROS is regularly evaluated during project planning and critical items are monitored during implementation. ROS current condition mapping was updated as part of the ongoing forest plan revision effort. The new current condition mapping is being used in project level evaluations. The forest began implementation of Travel Management in May 2012. Previous implementation efforts focused on patrol, education, signs. More recent actions include physical closures to protect sensitive areas from unauthorized motor vehicle use. In addition, fuels reduction projects and increased use of fire are helping to restore recreation settings over time and make them more sustainable. High use in designated Wilderness such as Humphreys Trail, Bell Rock and West Fork of Oak Creek have reduced opportunities for solitude in high use seasons, in other locations, opportunities for solitude abound. ROS and Wilderness Opportunity Spectrum (WOS) are being completed as part of the planning process for and will be included in the Fossil Creek Wild and Scenic River Comprehensive River Management Plan (CRMP).
Motor Vehicle Use	Impacts of motor vehicle use in designated camping corridors and prevalence of motorized use outside of designated areas.	Compliance will be measured through the collection and documentation of tickets, warnings, and incident reports. Impacts of motor vehicle use in designated camping corridors shall be measured based on field surveys.	Annually	Based on the observations of Forest Service field personnel, the camping corridors have had little effect to ground cover and the number of new spur roads in these areas. Monitoring of impacts in designated motorized camping corridors began in 2013 included data collection of 65 campsites along six designated camping corridors. This baseline data includes information on each campsite such as percentage of bare ground present, tree damage, and presence of litter and waste. Summary statistics show that surveyed camping corridors include both single and group-sized existing campsites (64.6% single and 35.4% group sites). These sites show, on average, light to moderate ground disturbance with minor tree damage and minor amounts of litter present. Overuse and resource damage concerns voiced by Kachina Village have resulted in providing designated dispersed campsites along nearby forest roads and a cooperative effort to provide leave no trace information to weekend campers. Scoping for Motor Use Vehicle Map updates has been initiated and will continue into 2016. There are a number of adjustments and changes needed to make the MVUM more effective. Emphasis continues to encourage electronic download of the map for more effective use by visitors. Users have found the electronic map much easier to use and are complimentary of this technology. For additional information see the Coconino National Forest Travel Management Monitoring Report: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3829013.pdf

RECREATION				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Dispersed Area Use and Experience Levels	Determine recreation use and demand.	RIM system/RVD's	Annually	RIM system has been replaced by NVUM. Survey data suggest a decrease in use in dispersed areas, but this cannot be confirmed with anecdotal evidence, as use of many general dispersed areas continues to be high especially over holidays and weekends. As travel management implementation continues, it is expected that there may be more evidence of concentrated use in camping corridors. If use begins to exceed provision of camping corridors, adjustments will need to be made in future years by designating additional areas for motorized camping. Public comments received during travel management implementation indicate the public desires additional camping corridors be identified for motorized dispersed camping opportunities, scoping of potential MVUM changes was initiated internally and public scoping will continue in 2016. In locations where resource damage is occurring, additional management actions may be taken to prevent its spread, and partnerships with local neighborhoods and communities will be encouraged to work together to find appropriate solutions.
Dispersed Area Condition	Prevent unacceptable resource damage.	RIM system, project reviews/area condition	Annually	Anecdotal evidence and monitoring suggests travel management compliance is fairly good, although there are still places where motorized cross country travel is causing resource damage. Designated motor vehicle camping corridors in some places are heavily used, and others receive light to moderate use. Trash and lack of sanitation in some heavily used corridors lowers the condition of the recreation settings. The need for Leave No Trace education has been identified in some areas and visitor contacts are planned.
Trail Condition	Determine effectiveness of Forest Trails Program.	RIM system, project reviews, trail condition surveys/miles	Sample 20% Annually	RIM system has been replaced by Trail Assessment Condition Surveys (TRACS) completed annually on approximately 20% of randomly assigned trails. Districts complete Trail Management Objectives (TMO's) indicating the trail class and type of use by trail. These are compared with TRACS to prioritize trail maintenance and improvements. Declining budgets result in decreased ability to keep trails to standard. The Forest has a backlog of maintenance and reconstruction identified by condition survey results. Volunteers work with the Forest to provide some maintenance, and in some areas Adopt-a-Trail programs are established where partners are trained to assist the forest with trail maintenance and patrols. Red Rock RD has successfully partnered with the City of Sedona to help fund trails work and staffing. Similar efforts will be explored with other local cities.
Visual Quality Objective (VQO) Compliance	Ensure Forest standards and guidelines for visual management are met.	Review project work plans and conduct project reviews - involving vegetative treatment, road/trail construction, or major development/acres by VQO	Annually	Forest VQO standards and guidelines are outdated. The Forest has completed Scenery Management System (SMS) mapping in preparation for the ongoing forest plan revision effort. This SMS mapping is now being used for project level environmental analysis per handbook direction. The conversion reflects changes in use patterns, increased visibility of Coconino NF landscapes, and increased concern for scenic quality by visitors. Scenic stability is fair to poor in many locations due to overstocked forest conditions and lack of periodic fire. As restoration projects are implemented, an improvement in scenic stability is expected over time. The second phase of the 4 Forest Restoration Initiative, Forest Watershed Protection Project, and C.C. Cragin watershed project will provide long term improvements in landscape character and scenic stability.

Wilderness

Wilderness				
Items Monitored	Intent	Monitoring Method	Measuring	Fiscal Year 2015 (FY15) Reporting Information
		(Unit of Measure)	Frequency	
Wilderness Use	Determine wilderness use	RIM system/RVD's	Annually	RIM system has been replaced by NVUM. The new measure is national forest visits. NVUM showed a 33% increase in total visits to
	and demand			wilderness between 2005 and 2010. Some wildernesses (Kachina Peaks, Red Rocks –Secret Mountain, Munds) exceed capacity in some
				areas. New wilderness performance measures have been selected, varying slightly by wilderness. The new measures place more emphasis
				on wilderness character. The revised forest plan removes many of the restrictions that have prevented wild fire management from being
				used as a tool to improve vegetation stability in wildernesses. Increased emphasis on multi-disciplinary management is expected to result
				in some improvement in wilderness character over time.
Wilderness	Minimize resource	RIM system, Code-a-	Annually	RIM and Code-a-Site were replaced with updated inventory protocols for the 10 elements of the 10 Year Wilderness Stewardship
Condition	damage and changes of	Site inventories, project		Challenge, which concluded in 2015 and will be replaced in 2016. The Coconino NF is working to improve its management to meet and
	wilderness opportunity	reviews/area condition		in some places exceed the basic standards. Wilderness intrusions are recorded. Requests for management activities in wilderness are
	spectrum (WOS) classes,			evaluated using the Minimum Requirements Decision Analysis. Some wildernesses (Kachina Peaks, Red Rocks- Secret, Wet Beaver)
	particularly primitive end			exceed WOS capacity in some areas. Campsite monitoring and invasive species monitoring continue and management actions are taken
				as needed.

Cultural Resources

CULTURAL RES	OURCES			
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Cultural Resource Compliance Project	Meet Federal regulation; ensure project compliance with guidelines.	Approved cultural resource clearance for each ground-disturbing activity.	Annually	Projects Surveyed, Sites Recorded, and Clearances Issued: No information available for FY15. Native American Graves Protection and Repatriation Act (NAGPRA): No information available for FY15. Non-Project Site Inventories (NHPA Section 110): No information available for FY15.
Cultural Resource Property Protection	Protect significant properties.	Patrol areas in conjunction with other duties/Site condition	Annually	Arizona Site Stewards Program: No information available for FY15. National Historic Preservation Act, Sec. 106 Monitoring: No information available for FY15. National Historic Preservation Act, Sec. 110 Monitoring: No information available for FY15. Elden Pueblo Maintenance: No information available for FY15. Collections Curation: No information available for FY15.

CULTURAL RES	CULTURAL RESOURCES					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Heritage Site	Provide recreational	No. of events: 68	Annually			
Enhancement and	and educational	1 to. of events. oo		Archaeology and Heritage Appreciation Month: No information available for FY15.		
Public Outreach	information to public to meet NHPA			Flagstaff Festival of Science: No information available for FY15.		
	Section 110 requirement.			Elden Pueblo: No information available for FY15.		
				Astronaut Training Ground: No information available for FY15.		
				Publications: No information available for FY15.		
				Tours and Lectures: No information available for FY15.		

Wildlife

WILDLIFE	WILDLIFE						
Northern goshawk (Accipiter gentilis), Pygmy nuthatch (Sitta pygmaea), and Mexican spotted owl (MSO) (Strix occidentalis lucida)							
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Amount of Mature and Old-Growth Habitat	Applied management achieves desired stand characteristics for old- growth and indicator species do not significantly decrease.	Old-growth inventory, compartment exams and habitat capability modeling/Acres.	Annually	Amount of Mature and Old Growth Habitat: Ponderosa Pine: FIA data available for 2001-2005 indicate that approximately 253,407 acres (32%) of the forest type is in the late seral stage. Mixed Conifer and Spruce-fir: FIA data for 2001-2005 indicate that approximately 7,750 acres (7.7%) of these forest types are in late seral stages.			
	Maintain habitat capability	Habitat capability model/percent habitat capability	Annually	Northern goshawk and Pygmy nuthatch: The primary cover type used by the goshawk and pygmy nuthatch is ponderosa pine. Forest-wide, the trend for late seral ponderosa pine is increasing slightly. FIA data available for 2001-2005 indicate that approximately 253,407 acres (32%) of the forest type is in the late seral stage. Although the age class distribution is shifting slightly, the proportion of the forest in uneven-aged conditions has stayed about the same. Mexican spotted owl: The MSO is tied to old-growth mixed conifer and ponderosa pine-gambel oak (pine-oak) habitats. Pine-oak represents approximately 40% of the ponderosa pine type. Although the amount of old-growth pine-oak is not known, it is assumed to be roughly proportional to the amount of old-growth in the Ecological Response Unit (ERU); therefore, an estimate of old-growth pine-oak is 101,363 acres (40% of 253,407 acres). Forest-wide, the trend for the amount of late seral mixed conifer and spruce-fir is increasing slightly, and these forest types are moving towards more even-aged structure.			

WILDLIFE	WILDLIFE					
Turkey (Meleagris go	allopavo merriami)					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually on 90% of affected projects	The primary cover type used by turkeys is ponderosa pine. The Forest-wide trend for late seral ponderosa pine is increasing slightly. FIA data available for 2001-2005 indicate that approximately 253,407 acres (32%) of the forest type is in the late seral stage.		
Population Trend	Meet population goal	Arizona Game and Fish Department (AZGFD) surveys/habitat capability modeling	Annually	Because estimating actual population size is difficult, the Arizona Game and Fish Department (AGFD) has been using the percent of archery hunters seeing turkeys during archery elk hunts, and the number of turkeys harvested during the spring to estimate population trends. Data on percent of hunters observing turkey and harvest data are available for 1997-2014. The available information indicates a variable, yet fairly stable turkey population on the Forest. No additional information available for FY15.		
Nesting Habitat	Maintain nesting habitat	On-the-ground evaluation	Annually and 5 year trend review	No information available for FY15.		

WILDLIFE	WILDLIFE					
Red Squirrel (Tamias	ciurus hudsonicus)					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually on 90% of affected projects	The red squirrel is a Management Indicator Species (MIS) for late seral mixed conifer and spruce-fir. FIA data for 2001-2005 indicate that approximately 7,750 acres (7.7%) of these forest types are in late seral stages and the Forest-wide trend for late seral mixed conifer and spruce-fir is increasing slightly. Forest structure is moving towards more even-aged conditions. No additional information available for FY15.		

WILDLIFE	WILDLIFE							
Elk (Cervus Canader	Elk (Cervus Canadensis) and Mule Deer (Odocoileus hemionus)							
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information				
Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually	Elk: No information available for FY15. Mule deer: No information available for FY15.				
Population Trends and Distribution	Meet population goal	AZGFD surveys/habitat capability model	Annually	Elk: AGFD uses a combination of annual survey data and population estimates derived from computer simulation modeling to evaluate trends in elk populations. AGFD is careful to note that many of the data inputs and assumptions lack the accuracy and precision for reliable model estimates; therefore, results should only be taken as gross population estimates and not as absolute numbers. Additionally, game management units are not closed systems for elk, and immigration and emigration is common but unmeasured; however, the modeled estimates have comparative value in establishing trend when compared from year to year (Arizona Game and Fish Department 2011). Consequently, AGFD recommends greater emphasis on trends rather than absolute numbers. Population trend estimates are available from 1988 through 2009, and the overall elk population trend on the Coconino National Forest is currently stable to increasing. AGFD surveyed for elk in 2014. Elk populations are largely determined by the number of fawns that survive their first year. In most Game Management Units, the number of fawns/100 cows stayed the same or increased over the previous 4-year average; the exception was GMU 7W, where the number dropped below the previous 4-year average (Hunt Arizona 2015). No information available for FY15. Mule Deer: The AGFD uses two indicators for mule deer population trend: 1) the number of mule deer observed during annual surveys, and 2) number of fawns per 100 does. These two indicators are used because they are more reliable than population modeling estimations for mule deer. On the forest, the current population trend for mule deer is declining. AGFD surveyed for mule deer in 2014. Mule deer population levels are largely determined by the number of fawns that survive their first year. In most Game Management Units on the Forest, the number of fawns/100 does were near or above average for the previous 4 years; the exception was GMU 7, which was well below numbers in the previous 4 years (Hunt Arizona 2015).				
				survive their first year. In most Game Management Units on the Forest, the number of fawns/100 does were near or above average for the previous 4 years; the exception was GMU 7, which was well below numbers in the previous 4 years				

WILDLIFE	WILDLIFE					
Abert's Squirrel (Sci	urus aberti aberti)					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually	The Forest Plan designates the Abert's squirrel as a management indicator species for early seral stage ponderosa pine forests and FIA data for 2001-2005 indicate that approximately 93,444 acres (11.8%) of the ponderosa pine type is in early seral stages. The Forest-wide trend for early seral ponderosa pine is slightly increasing. Although the age class distribution is shifting slightly, the proportion of the forest in uneven-aged conditions has stayed about the same. Although identified as an indicator for early seral ponderosa pine habitat, Abert's squirrels use a variety of age classes, and research from several locations has shown strong habitat associations with mature ponderosa pine. No additional information available for FY15.		

WILDLIFE Hairy woodpecker (Pa	WILDLIFE Hairy woodpecker (Picoides villosus), Pygmy nuthatch (Sitta pygmaea) & Red-naped sapsucker (formerly known as Yellow-bellied sapsucker) (Sphyrapicus nuchalis)					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Snag Densities, Sizes, and Species (Existing and Future)	Maintain habitat capability	Compartment exams, snag inventories, project reconnaissance and habitat capability modeling/acres	Annually	No information available for FY15.		

WILDLIFE	WILDLIFE							
Plain (Juniper) Titm	Plain (Juniper) Titmouse (Baeolophus ridgwayi)							
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information				
Amount of Mature and Old-Growth, Pinyon-Juniper	Maintain habitat capability	Habitat capability model/habitat capability	Annually	FIA data available for 2001-2005 indicate that approximately 391,630 acres (65.2%) of the forest type is in the late seral stages. Overall, the Forest-wide trend in late seral stage is stable, and stands are trending towards more even-aged conditions. No additional information available for FY15.				
Snag Densities and Sizes of Pinyon- Juniper	Maintain habitat capability	Compartment exams, snag inventories, and project reconnaissance/acres	Annually	FIA data available for 2001-2005 show there are an average of 2.4 snags per acre in the 12-17.9 inches diameter at root collar (drc) size range, and 1.4 snags per acres that are 18+ inches drc. Overall, the density of pinyon-juniper snags in all age classes is increasing, but the quality and longevity of snags is decreasing. No additional information available for FY15.				

WILDLIFF	WILDLIFE						
Pronghorn an	Pronghorn antelope (Antilocapra americana)						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Forage Availability	Maintain habitat capability	Production-Utilization surveys, habitat capability model/habitat capability	Annually and 9-13 years on each grazing allotment	Condition and trend of grasslands can be determined from at least two primary data sources: 1) information being used in the Final EIS for Forest Plan Revision on vegetation (ERUs) and soils, and 2) Range Allotment Analysis and the associated environmental analysis documents. Given high soil departure and vegetation and fire trends that are moving away from reference conditions, the Forest-wide trend for grasslands is stable to declining.			
				No information available for FY15.			
Population Trends	Meet population goal	AZFGD surveys/ Numbers	Annually	AGFD evaluates trends in pronghorn populations based on annual surveys and model-derived population estimates. The two best indicators for pronghorn population trend are the number of pronghorn observed and the number of fawns per 100 does observed. These indicators come from the annual surveys. Pronghorn population indicators have fluctuated since the late 1980's, with fawn:doe ratios showing greater fluctuation than number of pronghorn observed per hour. Within the range of fluctuations, the population trend appears to be relatively stable, with fawn:doe ratios increasing somewhat over approximately the last 10 years.			
				AGFD surveyed for pronghorn in 2014. Pronghorn population levels are largely determined by the number of fawns that survive their first year. In 2of 5 Game Management Units on the Forest, the number of fawns/100 does were near the previous 4-year average, 1 was well above average, and 2 were well below (Hunt Arizona 2015).			
				No information available for FY15.			

WILDLIFE							
Cinnamon teal (Anas	cyanoptera)						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Amount of Suitable Nesting Habitat	Maintain habitat capability	Field surveys (height density method) or score cards/acres)	Every 5 years on selected wetlands	No information available for FY15.			
Nesting Success	Maintain habitat capability	Systematic field sampling, cooperative survey with AZGFD/numbers	Every 5 years on selected wetlands	No information available for FY15.			

	WILDLIFE Riparian Areas, Lincoln's Sparrow (Melospiza lincolnii), Lucy's Warbler(Vermivora luciae), & Yellow-Breasted Chat(Icteria virens)					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Habitat Condition	Maintain habitat capability	Habitat capability modeling and systematic field sampling using riparian scorecard analyses/acres	5% of stream miles annually	No information available for FY15.		

WILDLIFE Aquatic-Macro Invertebrates					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information	
Species Diversity and Biomass	Maintain aquatic habitat effectiveness	Systematic field sampling (modified surber sampling)	Every 5 years on selected streams	No information available for FY15.	

WILDLIF	Œ						
Threatened	And Endangere	d Species					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Habitat	Meet Federal regulation	Field surveys/ Acres	Annually	Mexican Spotted Owl (MSO)			
				No information available for FY15.			
				Chiricahua Leopard Frogs (CLF) (Rana hiricahuensis)			
				No information available for FY15.			
				Yellow-billed Cuckoo (Coccyzus americanus occidentalis)			
				No information available for FY15. Listed Fish: Gila Topminnow (Poeciliopsis occidentalis occidentalis), Spikedace (Meda fulgida), and Loach Minnow (Tiaroga cobitis)			
				No information available for FY15.			
				Little Colorado Spinedace (Lepidomeda vittata)			
				No information available for FY15.			
				Fossil Creek Fish			
				No information available for FY15.			
				Spring Creek Fish			
				No information available for FY15.			

WILDLIF	E							
Threatened .	Threatened And Endangered Species							
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information				
Habitat	Meet Federal regulation	Field surveys/ Acres	Annually	West Clear Creek - middle (accessed via trail at end of FR142 J; aka Cash Tank trail) No information available for FY15. West Clear Creek - upper (accessed via trail at end of FR142 F). No information available for FY15. Arizona cliffrose (Purshia subintegra) The Arboretum at Flagstaff continued with their annual revisits to a series of demographic plots to monitor Arizona cliffrose and its associated Region 3 sensitive species; Verde Valley sage (Salvia dorrii ssp. mearnsii), heath-leaf wild buckwheat (Eriogonum ericifolium var. ericifolium), Ripley's wild buckwheat (Eriogonum ripleyi) and Rusby milkwort (Polygala rusbyi). The Flagstaff Ranger District established and monitored 3 transects in the North Gyberg Pasture of the Windmill Allotment to monitor the effects of grazing on Arizona cliffrose. The monitoring combined with changes in the timing of grazing brings the forest into compliance with the Recovery Plan for Arizona cliffrose. San Francisco Peaks Ragwort (Packera franciscana)				
				No actions relating to San Francisco Peaks Ragwort habitat in FY15.				

WILDLIFE

Threatened And Endangered Species

	nreatened And Endangered Species							
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information				
Population	Meet recovery plan goals	Field surveys, US Fish and Wildlife Service surveys/numbers	Annually	Mexican Spotted Owl: Total number of Protected Activity Centers (PACs) on the Forest: No information available for FY15. Number of PACs Monitored: No information available for FY15. Number of PACs Known Occupied: No information available for FY15. Percentage of PACs Monitored Occupied: No information available for FY15. Number of PACs w/ Pairs: No information available for FY15. Number of PACs w/ Known Young: No information available for FY15. Number of PACs w/ Known Young: No information available for FY15. Number of New PACs: No information available for FY15. Chiricahua Leopard Frog: Mogollon Rim Ranger District: No information available for FY15. San Francisco Peaks Ragwort: No actions relating to San Francisco Peaks Ragwort habitat in 2015. Little Colorado Spinedace: No information available for FY15. Gila Topminnow No information available for FY15.				

WILDLIFE				
Sensitive Species				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Amount of Suitable Habitat and Population Trends	Manage at appropriate levels to prevent listing as threatened or endangered species	Field surveys/ Acres	5 years	Bald eagle (Haliacetus leucocephalus) Wintering: No information available for FY15. Nesting: No information available for FY15. Beaver: - Coldwater: - Ladders: - Ladders: - Ladders: - Cold creek: - Tapeo: - Tower: - Oak Creek: - Tapeo: - Tower: Southwestern Willow Flycatcher (Empidonax extimus traillii) No information available for FY15. Bebb's willow (Salix bebbiana) and Blumer's dock (Rumex orthoneurus) No information available for FY15. Arizona bugbane (Actaea arizonica) Three Arizona bugbane sites were monitored. The plants were in good condition with no impacts observed. The Slide Fire in the West Fork of Oak Creek affected numerous occurrences of Arizona bugbane. Six visits were made to various areas to assess the fire effects. Plants were present on most sites within a few months after the fire but significant alteration of the habitat was observed. Long-term monitoring is needed to determine the response/recovery of Arizona bugbane and its habitat. Monitoring is a requirement of the Conservation Assessment and Strategy for the species, which was prepared in 1995 and incorporated into the Forest Plan as part of amendment 2. The Conservation Assessment and Strategy and the accompanying Conservation Agreement mitigated the threat of listing the species as threatened or endangered. The Slide Fire in the West Fork of Oak Creek affected numerous occurrences of Arizona bugbane. Six visits were made to various areas to assess the fire effects. Plants were present and Strategy and the accompanying Conservation Agreement mitigated the threat of listing the species as threatened or endangered. The Slide Fire in the West Fork of Oak Creek affected numerous occurrences of Arizona bugbane and its habitat. Location data for Arizona bugbane were entered into several databases (NRIS/TESP/Invasives) or edited to reflect the past visits and revisits to various occurrences. Red Rock Ranger District: Northern Arizona University student Wendy McBride is working on a Flora of West Clear Creek and reported finding 3 n

WILDLIFE			
Sensitive Species			
Items Monitored	Intent	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Amount of Suitable Habitat and Population Trends	Manage at appropriate levels to prevent listing as threatened or endangered species		Lowland leopard frog (Rana yavapaiensis) No information available for FY15. Northern Leopard Frog No information available for FY15. Rare Invertebrates No information available for FY15. Mexican Garter Snake (Thamnophis eques) No information available for FY15. Narrow-headed Garter Snake (Thamnophis rufipunctatus) No information available for FY15. Bats No information available for FY15.
			Peregrine Falcon (Falco peregrinus) No information available for FY15.
			110 Information available 101 1 1 13.

WILDLIFE	WILDLIFE							
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information				
Diversity - Successional Stages of Major Vegetation Types	Meet Federal regulation (National Forest Management Act (NFMA))	Compartment exams, field surveys, timber inventory, habitat diversity model/acres	Every 5 years	No information available for FY15.				

WILDLIFE				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Habitat Improvements - (Condition of Structural Improvements)	Identify those structures which must be reconstructed	Inspections/ structure	50% of structures per decade	No information available for FY15.
Stream temperature of cold water fisheries	Monitor current conditions and effects of management practices on stream temperature to assure compliance with State water quality standards and tolerance levels for cold water fish	Maximum temperature thermometers	All perennial cold water streams in the first decade. Five projects annually.	No information available for FY15.

Range O & M

Range O&I	M			
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Permitted Use	Meet Federal regulation, check for term grazing permit and Plan compliance.	Annual Grazing Statistical Report/ Animal Unit Months (AUMs) Forest- wide	Annually	 116,186 AUMs permitted for the 2015 grazing year. Flagstaff Ranger District: 45,700 Mogollon Rim Ranger District: 16,591 Red Rock Ranger District: 53,895
Actual Use	Check compliance with term grazing permit, Allotment Management Plan (AMP), and Forest Plan.	Grazing actual use record, permittee reports, and actual range counts/AUM's Forestwide	Annually	80,555 AUMs authorized for the 2015 grazing year. • Flagstaff Ranger District: 35,012 • Mogollon Rim Ranger District: 8,516 • Red Rock Ranger District: 37,027
Capacity	Meet Federal regulation, determine sustained livestock stocking levels.	Production and utilization surveys, range inspections/AUMs Forest- wide	50% of Forest acres per decade	Forage production plots were read on 2 allotments (8,153 acres) in FY15. • Flagstaff Ranger District: 1 allotment; 5,096 NFS acres • Red Rock Ranger District: 1 allotment, 3,057 NFS acres Range inspections for forage production and forage utilization were conducted on 155 pastures on 24 allotments in FY15. 155 pastures on 24 allotments met the established utilization or grazing intensity standards (100% of total pastures). 0 pastures on 0 allotments exceeded the established utilization or grazing intensity standards (0% of total pastures). • Flagstaff Ranger District: Inspections conducted on 130 pastures on 19 allotments. 130 pastures met utilization or grazing intensity standards; 0 pastures exceeded the utilization or grazing intensity standards.

Range O&N	Range O&M						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
				• Red Rock/Mogollon Rim Ranger District: Inspections conducted on 25 pastures on 5 allotments. 25 pastures met utilization or grazing intensity standards; 0 pastures exceeded the utilization or grazing intensity standards.			
Range Condition and Trend	Meet Federal regulation, identify changes in range condition and trend, recommend changes in management, and determine shifts away from grass aspect due to overstory.	Range analysis, transect data, photo plots, inspection records/ Acres	50% of Forest acres per decade	 Condition and trend studies conducted on all or portions of 9 allotments (80,214 acres) in FY15. Flagstaff Ranger District: 1 allotment; 5,096 NFS acres Red Rock/Mogollon Rim Ranger District: 8 allotments, 75,118 NFS acres Trend Monitoring Completed Trend monitoring (including reading Parker Three-Step plots and converting to Pace-Frequency plots), on Buckhorn (winter), Fossil Creek (winter), Ike's Backbone, Willow Valley, and Beaver Creek (summer & transitional) totaling approximately 62,000 acres. Soil condition Monitoring With MRRD hydrologist, completed updates to soil condition ratings on Beaver Creek Allotment in the Buck Mountain, Hollingshead West, and Woodland pastures totaling approximately 8,406 acres and on Willow Valley Allotment totaling 4,662 acres. Total of 13,068 acres. Riparian Monitoring Post Slide Fire inventories of Arizona Bugbane populations, in collaboration with the SO (Surveyed 50 acres). Condition and trend data was collected from 97 permanent plots in FY15. These plots are read annually to determine the effects to vegetation condition and trend due to the annual variation in climatic conditions. Flagstaff Ranger District: Data collected from 23 permanent plots. Red Rock/Mogollon Rim Ranger District: Data collected from 74 permanent plots, as follows: Trend Monitoring In coordination with the USFS wildlife specialist & Back Country Horseman, established 8 photo point monitoring sites at five stock ponds with the wedge fences for T & E Chiricahua Leopard frog critical habitat (Fossil Creek Allotment). In coordination with the USFS wildlife specialist & Back Country Horseman, established 5 photo points at critical dispersal corridors for T & E Chiricahua Leopard frog habitat (Fossil Creek Allotment). Monitoring of 2½ miles. Riparian Monitoring Established I pace-frequency monitoring site and the new Buck Springs			
Allotment Management Plan (AMP) Status	Meet Federal regulation, determine if permittee is in compliance, and if AMP reflects current needs of resource.	Actual use, permitted use, in capacity records, range analysis, production and utilization studies, and allotment inspections/plan	Yearly to once every 10 years per allotment	 Compliance with existing AMP's was determined on 31 allotments in FY15. Flagstaff Ranger District: Compliance with AMP's determined on 20 allotments. 3 allotments were in non-use during FY15 so determination of compliance with AMP was not necessary. Mogollon Rim Ranger District: Compliance with AMP's determined on 3 allotments Red Rock Ranger District: Compliance with AMP's determined on 8 allotments 			
				New AMP's were developed based on environmental analysis decision documents.			

Range O&I	Range O&M						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
				 Flagstaff Ranger District: No new AMP's developed in FY15 Red Rock/Mogollon Rim Ranger District: 1 new AMP's developed in FY15 			

Range Improvements

Range Improve	Range Improvements						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Condition of Structural Improvements	Meet Federal regulation, and identify those structures which must be reconstructed.	Range inspections, range analysis, permittee reports.	50% of range structures per decade (national requirement is now once every five years)	Condition of approximately 380 structural range improvements was determined in FY15. • Flagstaff Ranger District: Condition determined for approximately 153 structural range improvements • Mogollon Rim Ranger District: Condition determined for approximately 9 structural range improvements • Red Rock Ranger District: Condition determined for approximately 218 structural range improvements			
Condition of Nonstructural Improvements	Meet Federal regulation, and identify those vegetative improvements that require retreatment.	Range inspections, range analysis, production and utilization surveys, and permittee reports/acre	50% of treated acres per decade	Not applicable – There are no non-structural range improvements to monitor.			
Forage Condition in Transitory Range	Determine and monitor added capacity created behind timber and firewood cuts.	Range inspections, pre- sale review, compartment exams/acre	5-10 years on 50% of transitory acres	Not applicable – There are no transitory rangelands.			

Timber Reforestation

Timber Refo	Timber Reforestation							
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information				
Practices and Assumptions	Ensure that: • Regeneration is obtained within 5 years after final harvest cut and scheduled planting is accomplished or prior to final harvest cut when natural regeneration is planned.	Annual Reforestation/Timber Stand Improvement (TSI) Needs Report, plantation survival surveys, stand certification , silvicultural prescriptions, post-sale administrative review, Timber Management Information System (TMIS), Stand Database/Acres	Annually (plantation survival surveys are 1st, 3rd & 5 th growing seasons) or as scheduled. Annual stand certification for natural regeneration stands (5 th & 10 th years).	Third year survival surveys were conducted on 626 acres which were planted in the Spring of 2012 and on 345 acres which were planted in the Fall of 2012. Survival rates For the Spring of 2012 planting survival was 45% (compared to 70% in year 1); for the Fall 2012 planting survival was 23% (compared to 55% in year 1). No stand certification for natural regeneration was conducted because no regeneration harvests have been implemented in the last 5 years.				

Timber Stand Improvement

Timber Stand In	Timber Stand Improvement						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Timber Stand Improvement Acres and Assumptions	• Scheduled TSI projects	Silvicultural prescriptions, accomplishment reports, certified projects, Reforestation/TSI Needs Report, Stand Database/Acres	Annually	The Flagstaff Ranger District completed 68 acres of hand thinning timber stand improvement (TSI) in the Airport Project and 3 acres in the Jack/Smith Schultz Project. Approximately 970 acres were planted in the Schultz Fire. Completed 3rd year survival surveys across 1,000 acres of planting in the Schultz Fire. Three new aspen exclosures were constructed; two in the Wing Mountain Project and one in the Mormon Lake Basin Project to protect aspen regeneration. Conifer weeding was completed on 21 acres within existing exclosures in the Hart Prairie Project.			

Timber

Timber	Гimber							
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information				
Silvicultural Assumptions and Practices	Ensure that: • Appropriate management is applied to Retention and Partial Retention zones and riparian areas, • Rotation age and Culmination of Mean Annual Increment (CMAI) assumptions are correct, • Silvicultural prescriptions follow management area standards, • Silvicultural prescriptions precede vegetative treatments, • Silvicultural prescriptions are practical and achieve desired results	Silvicultural prescriptions, Environmental Assessments (EA), project reviews	Annually	Prescriptions were completed on approximately 4,000 acres on the Wing West Task Order and 700 acres of Phase 1 of the Flagstaff Watershed Protection Project (FWPP). The Record of Decision (ROD) for the Four Forest Restoration Initiative First Analysis was signed in FY15. The ROD covers the majority of the ponderosa pine forests on the Flagstaff Ranger District. Grassland restoration was completed on 15 acres in FY15. A clear cut was created on 25 acres as part of the stream channel restoration for the Schulz Fire post-fire flood mitigation work. Subsequent analysis will be needed at a later date to determine reforestation needs for this area.				
Timber Assumptions: Volume, Productivity, Condition, Class, Acres Harvested	Ensure the following are correct: • Board foot/cubic foot ratios, • Volume/acre yield, • Condition class assignments, • Schedule of acres harvested	Sale review, EAs, cruise summaries, TMIS, compartment exams, stand data base Use the same conversion ratios as used in Plan calculations/ As appropriate	Annually	All Forest Supervisor authority timber sales were reviewed (including all FY15 4FRI task orders; Clints South; Mrs. Jones; Stoneman; Hochderffer; Schoolhouse; and Wing East and FY15 timber sales (including Railroad Multiproduct; Paint Brush; South Administrative Free Use; Snowbowl – Canyon Express Timber Settlement; and Munds Park Re-Offer Multiproduct). Standard Forest Service timber cruising software programs and reporting databases were used, including TIM and FACTS.				
Size of Openings	Ensure that: • Openings comply with size limits and are periodically evaluated for appropriateness	EAs, presale and administrative reviews, and post-sale reviews/ Project area	Annually	Flagstaff Ranger District: All openings created on the above listed task orders and timber sales follow prescription guidelines and are verified by GPS or site visits. Openings ranged from 0.1 to 4.0 acres with most being less than 1 acre, except for openings created to address dwarf mistletoe infection, which varied based on the severity of the infection. Mogollon Rim Ranger District: No interspace or regeneration openings were created in 2015 on Mogollon Rim Ranger District. Where prescribed in prescriptions, openings are generally up to 1 acre in size, and never more than 4 acres. Where prescribed openings are >1 acre, 3-5 seed trees are retained.				
Acres of Overstory and Final Removal Harvests	Meet Federal regulation, measure prescriptions and effects	TMIS, Staff review of 5% of treatment projects (at least 2 projects) /Acres	Annually	No overstory removal or final removal harvests were performed on the Forest in FY15.				
Acres of Intermediate Harvest	Meet Federal regulation, measure prescriptions and effects	TMIS, Staff review of 5% of treatment projects (at least 2 projects) /Acres	Annually	Two timber sales on the Flagstaff Ranger District were harvested with 1,609 acres cut on the Howard Timber Sale and 288 acres cut on Woody 05 Timber Sale. On the Mogollon Rim Ranger District, approximately 568 acres (479 acres of commercial thinning and 89 acres group selections) of the Mr. Jones Timber Sale was harvested.				

Timber				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Board Feet of Net Sawtimber Offered, Sold, and Harvested	Meet Federal regulation, measure output, assure timber offered or available for offer meets, but does not exceed, the allowable sale quantity.	Program Accounting & Management Attainment Reporting System (PAMARS; an annual reporting system); programmed harvest reports/million board feet (mbf)	Annually	Offered: 85,746 mbf/ 181,360 ccf Sold: 85,746 mbf/ 181,360 ccf Harvested: approximately 10,674 mbf/ 16,730 ccf
Cords of Firewood Available	Ensure that: • Green firewood is made available, • Potential firewood from timber sales and road building is made reasonably available to the general public before slash disposal	Review annual total of firewood sale reports, firewood advertised but not sold, and free use/cords	Annually	Several free use areas were identified on the Flagstaff and Mogollon Rim Ranger Districts using slash piles from recent timber sales and 2010 tornado damage areas for personal use firewood. Approximately 5 cords of commercial firewood were sold in FY15. Most of the volume was sold as incidental to some other project, such as powerline clearing. Personal Use Paid: 17,676 cords 8,875 mbf/ 13,911 ccf Personal Free Use: 2,161 cords 944 mbf/ 1,888 ccf No green firewood was made available because there was insufficient capacity on the Forest to establish and administer these areas.
Yield Projections	Ensure that: • Yield projections are correct	Establish Growing Stock Level (GSL) studies in cooperation with Rocky Mountain Forest and Range Experiment Station (RMFRES)/ Permanent plots in regenerated stands/ mbf/acre and/or trees/acre	First decade	Not applicable
Re-evaluation of Unsuitable Timber Lands	Evaluate the accuracy of suitable timberlands classification, periodically reexamine lands identified as not suitable for timber production to determine if they have become suited and could be returned to timber production	Review new or updated soil survey data, compartment exam, project plans, timber planning process/Acre	Cover entire Forest in 1st decade (1/10 of Forest annually)	Re-evaluation of unsuitable timber lands is done as each large-scale EA is completed. The 4FRI ROD was signed in FY15. This process, however, has been incorporated as part of the forest plan revision process, which is ongoing at this time.

Watershed/Soil/Air

Watershed/S	atershed/Soil/Air					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Watershed Condition of Forest Lands	Meet Federal regulation, ensure that Forest watersheds in satisfactory condition by 2020, assure productivity of the land is maintained.	Watershed Condition Framework, FS-977, May, 2011 and Watershed Condition Technical Guide, FS-978, July, 2011. Soil Condition Field Evaluation Form and Soil Condition rating Guide (FSH amendment 2509.18- 99-1. Standard Watershed Condition Inventory according to R3 Hydrology Note 14 Photo points, ocular estimates to determine trends/acres.	10% annually	The Watershed Condition Framework was used to assess watershed condition at the 6th Hydrologic Unit Code (HUC) level. Baseline watershed condition assessments (step A) were completed on all (100%) of the 101 6th HUC watersheds following the Watershed Condition Framework (WCF) process in 2011, so no more are needed at the 6th HUC level. The majority of 6th HUC watersheds (64%) are in Functional at Risk condition followed by Properly Punctioning (24%) and Impaired Function (12%). Implementation and monitoring began in FY 2012 and continued in FY15. The Middle and Lower Oak Creek watersheds were selected as priority watersheds with a Watershed Restoration Action Plan, environmental analysis, and monitoring to follow in 2016 and 2017. Evaluation of the West Cleur Creek watershed following the 2014 Slide Fire indicated that the overall watershed condition has not changed due to vastly improved and recovered vegetation conditions. No watershed conditions were changed at the 6th HUC level in 2015. Watershed condition monitoring occurred on the following projects: Slide fire watershed recovery monitoring occurred in April and September. Results indicate vegetative ground cover from seeding and mulching the wildfire along with natural recovery has moved the West Fork of Oak Creek and Upper Oak Creek watershed from poor (post burn) to good hydrological conditions and recovery excellent. This monitoring documents the intent of the forest plan to maintain soil productivity by 2020. In 2012-2013, the Lower Fossil Creek 6th HUC Watershed Restoration Action Plan was completed. This 6th HUC watershed was rated as Functioning at Risk. Some essential projects and interim measures were implemented in 2015 and monitored with Best Management Practices (BMPs). This monitoring documents the intent of the forest plan to maintain soil productivity by 2020 and assure compliance with Forest Plan requirements to assure water quality meets state standards. In 2014, the Walnut Creek – Upper Lake Mary Watershed Restoration Action plan wa		

Watershed/S	Watershed/Soil/Air						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Watershed/ Soils Prescriptions	Monitor projects to determine 1) compliance with recommendations and suitability of recommendations and Best Management Practices (BMPs), and 2) to ensure water quality standards are met.	Review soil disturbing projects for compliance with BMPs and water quality standards.	Minimum of 1 project per District per year	BMPs were identified, and implementation and effectiveness monitoring occurred, on soils and watershed prescriptions on the following projects: • Spring Creek Fish Barrier Construction • Leafy Spurge Control Outside Brolliar Park • The General Resource Benefit Fire. Resource benefit fire treatment is expected to reduce the risk of uncharacteristic wildfire resulting in accelerated erosion, sediment delivery and better protect East Clear Creek water quality. • Fry Canyon Meadow Dispersed Recreation Use • Howard Timber Sale Vegetation Manipulation Task Order (1,610 acres). Treatment is expected to reduce the risk of uncharacteristic wildfire resulting in accelerated erosion, sediment delivery and better protect East Clear Creek water quality. BMPs and associated monitoring were identified in prescriptions and plans to assure they were properly implemented as specified and effective using the National core implementation monitoring protocol. BMPs included (but not limited to) designation of skid roads and landings, harvesting under the proper soil moisture conditions, for mechanical thinning and prescribed burning, retaining adequate large woody debris, burn under proper moisture conditions and to protect soil organic material, weed herbicide spraying on spot populations and label following, camouflage and lop and scatter of debris on road closures. The results indicate in all cases that the soil and water BMPs were implemented correctly (with some follow-up of timing of harvest activities) and were effective at reducing non-point source pollution from forest ground disturbing activities. Acres of mechanical thinning, broadcast or pile burning, or natural wildfire ignition can be found in the fire and timber sections of this report. They are expected to reduce the risk of uncharcteristic wildfire. Several wildfires were managed for resource benefit, also. Soil and water BMPs were implemented and monitored on these projects. This monitoring documents the intent of the forest plan to review ground disturbing pro			
	Monitor watershed condition in project areas.	Standard watershed condition transects (per Hydro Note 14)/Project	1 Project/year Forest-wide	In 2015, soil condition assessments were completed in 7 pastures and ecological units in the Apache Maid Allotment to determine existing condition. Soil and watershed condition was monitored on the Fossil Creek Allotment to determine hydrologic function and vegetative ground cover. This monitoring documents the intent of the forest plan to monitor watershed condition and maintain soil productivity by 2020.			

Watershed/S	Watershed/Soil/Air					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Riparian Improvement Projects	Resolve Issues at Forest level and meet Federal regulation; review riparian improvement projects for changes in ground cover, species composition, bank stability, stream flow and water quality changes, effectiveness of and compliance with recommendations	Standard watershed condition transects, ocular, estimates and professional judgment/ Project	1 Project/year Forest-wide	Portions of McClintock (20 acres of thinning), Hoxworth (2.5 acres) and Buck Spring (6 acres) riparian area meadows and Allen Lake wetland (4 acres) were restored. Professional judgment and ocular monitoring were used to assure improvement project met specifications for streambank stability, maintenance and protection of vegetative ground cover and water quality. Forest personnel were on site and monitored to assure additional interim treatments adjacent to Fossil Creek were implemented correctly. Operation and cleanout of temporary latrines also occurred in highly used recreational sites for reduction of <i>E.coli</i> pathogen contamination. Additional follow-up water quality testing is needed to determine if there has been a change in water quality. The monitoring indicated BMPs and resource protection measures were successfully implemented as planned and appear to be effective. This monitoring documents the intent of the forest plan to review ground disturbing projects using appropriate monitoring techniques including BMPs to assure compliance with Forest Plan requirements to assure ground disturbing, riparian improvement projects protect water quality and meet state standards and riparian areas are in satisfactory conditions.		
Riparian Areas	Monitor condition and trend of riparian areas photo points.	Standard watershed condition transects, Proper Functioning Condition assessments, ocular, estimates, photo points	5 percent annually	PFC riparian area monitoring was conducted on 1.5 miles of streamside riparian areas on Dry Beaver Creek on the Apache Maid Allotment and 2 miles on Jacks Canyon of the Windmill Allotment. Monitoring in the future will compare to this baseline monitoring on these riparian areas to determine riparian condition and trend. Other riparian monitoring includes the following; • Established MIMS Riparian protocol at Deer Run Spring and Rattlesnake Canyon. • Re-photographed Riparian Photo-Plot Monitoring of Bull Run and Deer Run Springs, and Russell Wash (Walker Basin Allotment) Riparian areas. • Established Riparian Photo Point Monitoring for Sycamore Canyon & Cottonwood/Mesquite Springs (Hackberry/Pivot Rock Allotment). This monitoring documents condition and trend of riparian areas in meeting satisfactory riparian condition guidance in Forest Plan. Seasonal, monthly, or daily stream gauge monitoring continued on Barbershop Canyon, Yeager Canyon, and Fossil Creek. The automated stream gauge at Fossil Creek was recently installed to quantify daily and year round flows necessary to validate Wild and Scenic River reserved water rights. Stream gauge monitoring documents the intent in the Forest Plan to procure instream flow water rights.		
Road Obliteration	Ensure compliance with Standards and Guidelines concerning road densities. Forest Issue related.	Work accomplishment reports/miles	Annually (Report in years 3, 6, 9)	8 miles of road were decommissioned forest-wide. This monitoring documents work accomplished meeting towards road density guidance in Forest Plan.		

Watershed/S	Watershed/Soil/Air						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Water Quality	Ensure compliance with Standards and Guidelines, State and Federal Water Quality Standards.	Fecal coliform sampling at sites designated for full body contact	3 Sites Annually (minimum)	Friends of the Forest Water Quality Monitoring: Weekly samples using Arizona Department of Environmental Quality's (ADEQ) method were taken year round at six different sites on Oak Creek and Fossil Creek in high use recreational areas. These samples are tested for E coli. Monitoring results informed forest managers to adjust current recreation use and closures (if necessary) on Oak Creek. This monitoring documents the intent of Forest Plan requirements to assure water quality meets state standards. Water quality by stream types monitored by ADEQ can be found at this link: http://www.azdeq.gov/environ/water/assessment/index.html . ADEQ monitors several perennial streams and lakes on the forest in 3 year cycles. This monitoring documents the intent of the forest plan to assure water quality meets state standards.			

Minerals

MINERALS	MINERALS						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Compliance with Terms of Minerals Operating Plans	Meet legislative mandate and Agency guidelines.	Field checks/ Plans	Annually	At least 44 personal use permits or activities were administered in existing pits. 188 permits were issued for gathering of saleable minerals in existing personal use pits or approved locations for either county or other permit holders for use on National Forest. Two operating plans were administered for existing mining claim operations. Coconino County was authorized to conduct exploration trenching in Park Knoll Pit. Coordination is continuing with local jurisdictions on mineral resources and pits, including preparing for pit expansion associated with the Rock Pit EA for the 4FRI project. Herbicide treatments were completed in mineral pits to support 4FRI and other forest uses and prevent weed spread during forest uses.			
Non-patented Mining Claim Compliance	Minimize illegal mining activity.	Field checks, Bureau of Land Management (BLM) file checks	Annually	There is little mineralization and, therefore, little mineral activity on the Forest. Claims are reviewed when reviewing land adjustment cases only if there is activity observed.			

Special Use Permits

SPECIAL USI	PECIAL USE PERMITS					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Special Use Permits	Process and administer special use permits in accordance with established guidelines.	Land Uses Report (LUR), field inspections/ Permits	Annually	321 lands permits were administered to standard in FY15. Administered to standard includes required field inspections at least once every 5 years. 163 recreation permits were administered to standard. 137 recreation permits (primarily short term recreation events and group use permits) and 70 lands permits/amendments (43 temporary filming/still photography permits) were processed in FY15. The forest has approximately 557 permits in the issued status. Backlog of expired lands permits is being reduced through use of cost recovery fees.		
Land Purchase, Acquisition, and Exchange	Consolidate Forest lands and meet public needs.	Forest Land Adjustment Plan, Management Accomplishment Report (MAR) target/ Cases	Annually	Completed the Camp Verde Education Land Grant Act case for 20 acres of conveyance. Continued processing of the Show Low South Land Exchange project. Continued work with Western Rivers Coalition on acquisition of the Fossil Creek private parcel.		
Occupancy Trespass	Minimize Forest trespass problems.	Field checks, landline location/ Cases resolved vs. new cases	Annually	One Small Tracts Act encroachment case was completed through completion of the Mountainaire legislation, including resolution of several encroachments with multiple owners in coordination with a title company. One other trespass case was resolved as a result of sale to Camp Verde Unified School. New cases continue to add to a backlog list of older encroachment cases.		
Landline Location	Maintain Forest boundary.	Landline location, MAR target/ Miles	Annually	21.9 miles of boundary line were maintained to standard in FY15. 3.0 miles were maintained under the lands budget, including 1 mile of Wilderness boundary. 13.0 miles were maintained as part of the Four-Forest Restoration Initiative under an agreement with BLM. 5.9 miles of boundary was maintained through an agreement with Coconino County in support of the Flagstaff Water Protection Project.		

Roads

ROADS				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Arterial/Collector, Construction/ Reconstruction	Ensure compliance with identified needs for arterial/collector reconstruction. Forest Issue related	Work accomplishment reports/Miles	Annually	Improvements to existing ML 3, 4, and 5 roads – 41.7 miles ML 2 Road Maintenance – 83.6 miles ML 3 Road Maintenance – 365.1 miles Road Decommissioning - 8 miles As per the current Forest Plan, "Roads not needed for effective use and administration of Forest resources are obliterated as funding becomes availableThe remainder of the road system will be reconstructed on a rotational cycle based on a needs and benefit/cost analysis. Others are maintained for user safety and resource protection." The Forest has utilized current funding to provide and maintain a serviceable transportation system that meets the needs for public access, land management, resource protection and user safety.
Purchaser Credit Roads	Ensure compliance with identified needs for P/C construction/ reconstruction	Work accomplishment reports/Miles	Annually	None.

Protection

PROTECTION	PROTECTION						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
				The number of acres impacted by bark beetles decreased considerably in 2014 (2,574), compared to 2013 levels (22,657) on the Coconino NF. The notable change is in the forest type affected and the species of bark beetle that are now becoming more active. In 2012, approximately 99 percent of the mapped bark beetle activity occurred in ponderosa pine forests and less than one percent occurred in mixed-conifer or spruce fir forests. This year, around 83 percent of the mapped mortality occurred in the pine type, around 13 percent occurred in the mixed-conifer, and about four percent occurred in spruce fir forests.			
Growth Reduction and	Ensure endemic and introduced infestations do not	Integrated Pest Management aerial observation by regional		All bark beetle species have decreased in mixed-conifer forests, including mountain pine beetle and the Douglas-fir beetle. Noteworthy levels of mountain pine beetle and Douglas-fir beetle were at low levels of 540 acres mapped for each species in 2014. In the spruce fir type, the western balsam bark beetle and spruce beetle have caused only 20 acres of mortality in corkbark fir and Engelmann spruce on the San Francisco Peaks.			
become become become Reduce effect	become epidemic. Reduce adverse effects of dwarf mistletoe.	entomologists, compartment exam, project inspections and reviews/Acres, Forest-wide	Annually	The number of acres impacted by defoliators increased slightly on the Coconino NF in 2014. The pine sawfly outbreak on the border of the Coconino and Kaibab National Forests continues to be active. The number of acres affected on the Coconino NF increased from 184 acres detected in 2013 to 610 in 2014, still well below the level of 2,120 detected in 2012. The large aspen tortrix, <i>Choristoneura conflictana</i> , defoliator continued to impact of aspen around the north and west sides of the San Francisco Peaks. Mapped acres for this defoliator increased slightly from 1,400 acres in 2013 to 1560 acres in 2014. Mapped acres for this defoliator increased slightly from 1,400 acres in 2014. No Western spruce budworm activity was recorded in 2014.			
				More information, including the 2014 report on forest insect and disease conditions in the Southwestern Region may be found on the U.S. Forest Service's Southwest Region, Forest Health and Scientific Publications web site at: http://www.ForestService.usda.gov/detail/r3/maps-pubs/?cid=stelprdb5176419			
	Ensure prescribed fire does not cause			No violations per ADEQ.			
Air Quality	violations of State and Federal air	Project reports, field monitoring	Annually	Field monitoring is consistent with guidelines set in Forest Service Manual 5100, Chapter 5140: Prescribed Fire.			
	quality standards in sensitive areas.			Daily prescription (Rx) requests are submitted for approval from ADEQ.			
				1,361 acres treated with pile burns.			
				10,114 acres broadcast burned within Wildland Urban Interface (WUI).			
	Ensure balanced fuel treatment			3,110 acres broadcast burned within areas identified as Non-WUI.			
Fuel Treatment Outputs	outputs, emphasizing utilization.	Accomplishment reports/Acres	Annually	36,576 acres claimed as wildfires meeting multiple land management objectives.			
				699 mechanical integrated treatment.			
				FY15 Totals: The Forest fuel treatment target was 15,000 acres. The Forest treated a total of 15,284 acres as core target, and 36,576 acres as integrated target.			

PROTECTION				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Wildfire Acre PAR's	Ensure wildfire acres are within projected annual burned acres period and by Fire Management Zone where acres are not specific to Management Areas (MA).	Reports/Acres	Annually	Wildfire Acre PARs represent old Forest Plan standards/guidelines that are out dated and irrelevant based upon best available science and national program direction. A Fires 161 (Class A - one-fourth acre or less). B Fires 35 (Class B - more than one-fourth acre, but less than 10). C Fires 5 (Class C - 10 acres or more, but less than 100 acres). D Fires 1 (Class D - 100 acres or more, but less than 300 acres). E Fires 3 (Class E - 300 acres or more, but less than 1,000 ac). F Fires 4 (Class F - 1,000 acres or more, but less than 5,000 ac). G Fires 1 (Class G - 5,000 acres or more). Total Fires: 214 (71 Human caused, 143 Lightning). Total Acres Burned*: 1,290.55 Human / 36,922.75 Lightning. *Note: 6 wildfires were claimed for meeting land management objectives in FY15; these acres totaled 36,576 or 99% of lightning caused acres.
Cost of Suppression, Protection, Organization, and Net Value Change	Keep fire management program cost effective.	PAMARS/Dollars	Annually	Suppression costs were minimized as much as possible to meet objectives in maintaining resource effectiveness and safety guidelines during suppression activities. Larger and long duration fires were managed under the Wildland Fire Decision Support System (WFDSS) process where costs were tracked and objectives were created to keep costs commensurate with the Values At Risk. Suppression costs are tracked through the use of wildfire suppression funds and a summary of total suppression costs for 2015 is not currently available. Pre-suppression costs have remained flat or have decreased slightly due to lower budget levels in 2015. NOTE: Net Value Change – represents old forest plan language that is no longer appropriate or easily attainable without extensive resource area analysis stating the net present value of every resource on the forest. In addition, national policy/direction supports the idea that fire is beneficial on the landscape, and that fire does not cause permanent determinate to resources.
Fire Suppression Effectiveness	Meet Federal regulation and measure prescriptions and effects.	Periodic inspections and reviews to determine if fire management organization is effective in controlling fire losses within prescription; the use of the fire budget analysis process to determine fire management efficiency; and reviews of selected fires. Annual inspections, periodic reviews, and use of fire budget analysis process as needed.	Annually	Pre-season planning and budgetary allocations are coordinated to provide effective and efficient fire suppression response to wildland fires based on historical data and projected fire danger ratings through the use of hazard analysis procedures. The Forest still continues to maintain a minimum of 98 percent suppression of all fires within the initial attack (IA) period (first 24 hours). Line officers review suppression effectiveness through on-site inspection of a min of 10% of all fires per fiscal year. Pre-season preparedness reviews are conducted and safety discussions held. After-Action Reviews are held after each operational period. Informal reviews are conducted periodically during the fiscal year to assess needs to the fire organization. Budget allocations for the Forest are discussed with Regional Office Fire Management to evaluate requirements for funding levels. Mid-year reviews are conducted to project funding needs and/or potential savings in the Preparedness Budget through the end of the FY. Spring and Fall fire leadership meetings are conducted to confirm fire program needs to meet operational objectives for fire suppression.

PROTECTION	PROTECTION						
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information			
Law Enforcement Person Hours	Improve law enforcement Forest Issue related	Professional evaluation of trend based on a review of case loads, solution rates and public complaints. Based on: protection of cultural resources, Off-road Driving damage, firewood theft, dollar cost of vandalism and trends in user protection. Update monthly using Law Enforcement & Investigations Management Attainment Report System (LEIMARS)	Annually	Law enforcement Officers on the Forest respond to Washington Office, Regional Office and Zone priorities in addition to Forest and District issues. The demand for law enforcement exceeds Forest capacity. Enforcement of TMR focuses on off-road travel violations. With the Forest and District's efforts to install more signing, blocking closed roads and opening some roads there's been more compliance and fewer violations and incidents. In addition the number of violations are down due to the lack of a fire season and not implementing fire restrictions. Overall law enforcement activities have increased with greater concern for employee and public safety due the increase in gun violence, domestic terrorism and anti-federal activities that are occurring. FY 2015 statistics include: Fines collected: \$59,877 Damage to Government property and resources: \$14,201 Public contacts: 14,189 Violations issued: 518 Warnings issued: 386 Arrests: 24 Cannabis plants eradicated: 0 Cannabis plots eradicated: 0			

General Administration

GENERAL ADMI	INISTRATION			
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Citizen Participation Plans Public Affairs Standards	Measure responsiveness to potentially affected interests.	Citizen Participation Plan and Public Affairs Plan review/ Completed contacts and actions	Quarterly	Based on quarterly Schedule of Proposed Actions (SOPA) reports from October 2014 – September 2015, public contacts were made with respect to:
				Forest-wide and Multi-District APS 69kv Power Line Permit for Childs-Irving Line CE APS Existing Transmission Line Permit Reissuance CE AZ Public Service – Salt River Project ROW Vegetation Management with Herbicides EA City of Flagstaff Water Facility Improvements CE Forest Plan Revision for the Coconino National Forest EIS Fossil Creek TMR Road Closures and Decommissioning CE Four-Forest Restoration Initiative (Kaibab and Coconino) EIS Glen Canyon to Pinnacle Peak Transmission Line Vegetation Management EA NPG Cable of Arizona Issuance of 10 Year Permit CE Oak Creek Overlook Vending Special Use Reauthorization CE Rock Pit Development: Coconino and Kaibab National Forests EA Stock Tank Invasive Aquatic Species Management CE

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Citizen Participation Plans Public Affairs Standards	Measure responsiveness to potentially affected interests.	Citizen Participation Plan and Public Affairs Plan review/ Completed contacts and actions	Quarterly	Based on quarterly Schedule of Proposed Actions (SOPA) reports from October 2014 – September 2015, public contacts were made with respect to:
				Mogollon Rim Ranger District: • Arizona Trail Gate Improvement Project CE • Baker Butte Coconino County Sheriff's Communication Lease CE • Buck Mountain, Baker Butte Lookout Tower Viewshed Project CE • C.C. Cragin Fuels Reduction Project EA • Camping Areas for Group Gathering Special Use Permits, Mogollon Rim District 2014 CE • Clint's Well Underground Powerline Replacement CE • Forty-Four Canyon Recreation Residence Tract Special Use Permit Modification CE • Mahan-Landmark Forest Restoration Project EIS • Mogollon Rim Christmas Tree Cutting, Wildcat Springs Area CE • Mogollon Rim Ranger District 2014 Special Use Reauthorizations CE Flagstaff Ranger District: • Angel Grazing Allotment EA • APS Mt. Elden Distribution Line Reconstruction Project CE • APS NO1 Youngs to Mormon Lake 69 kV Power Line EA • Dahl FLPMA Forest Roads Special Use Permit CE • Deer Hill Trail Public Access Connector Trails CE • El Paso Natural Gas Company Installation of Ground Bed, Rectified and Campstone Generator CE • El Paso Natural Gas Company Installation of Ground Bed, Rectified and Campstone Generator CE • El Paso Natural Gas Company Installation of Ground Bed, Rectified and Campstone Generator CE • Flagstaff Ranger District 2014 Special Use Reauthorizations CE • Flagstaff Watershed Protection Project EIS • Forest Road 128A Improvements CE • Highway 180 Motorized Trails EA • Hitchin Post Stables Special-Use Permit Reauthorization CE • McCormick Pit Native Material Site CE • McCormick Pit Native Material Site CE • McLormick Pit Native Material Site CE • St. Isoseph's Youth Camp Septic System Test Pits CE • St. Isoseph's Youth Camp Septic System

GENERAL ADM	INISTRATION			
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information
Citizen Participation Plans Public Affairs Standards	Measure responsiveness to potentially affected interests.	Citizen Participation Plan and Public Affairs Plan review/ Completed contacts and actions	Quarterly	Based on quarterly Schedule of Proposed Actions (SOPA) reports from October 2014 – September 2015, public contacts were made with respect to:
				Red Rock Ranger District: 9205K Road Realignment Project CE • Apache Maid Rangeland Management Analysis EA • Arizona Water Company Water Storage Tanks EA • Bradshaw Ranch Climate Change Experimental Garden Array Research Permit CE • Cave Springs Bank Stabilization EA • Cedar Flat Wildlife Habitat and Watershed Enhancement Project CE • Chavez Ranch Road Improvements EA • Chiricahua Leopard Frog Habitat Improvements CE • Cornville Community Trail CE • Cornville Single Track Trail CE • Cornville Single Track Trail CE • Fossil Creek Wild and Scenic River Comprehensive River Management Plan EA • Greasy Spoon Road Maintenance - Phase 2 CE • Hummingbird Garden Eagle Scout Project CE • Ike's Backbone EA • Lawrence Crossing Toilet CE • Miss Cindy Pasture Fence Realignment CE • Oak Creek Dog Waste Stations CE • Red Rock Trails Phase IV CE • Reissuance of Outfitter/Guide Use in Broken Arrow CE • Road Closures for Threatened, Endangered and Sensitive Species CE • Sedona-Oak Creek Alternative Transportation Study EA • Soldier Pass Motorized Use EA • Spring Creek (Oak Creek Alternative Transportation Study EA • Spring Creek (Oak Creek Aquatic Species Protection) EA • Travel Management Rule (TMR) Implementation CE • Verde Valley Botanical Area Protection: Fenceline Modification CE

GENERAL ADMI	GENERAL ADMINISTRATION					
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2015 (FY15) Reporting Information		
Verification of Unit Cost Used in Plan Compared to On-the- Ground Cost	Acquire accurate cost data.	Actual costs from a representative sample of projects and programs including both force account and contract. Discount to 1982 dollars for comparison to Plan costs/Dollars	Annually	Due to a change in budgeting process, this can no longer be tracked in the same manner.		
Effects of Management on Adjacent Lands on National Forest Goals and Objectives	Determine effects of management of other ownership on Forest Plan.	Reports from appropriate resource monitoring items, review of other Agency plans, new issues	Every 5 years	Effects of adjacent land management on Forest goals and objectives has led to an increased public interest for Forest lands to provide open space around communities, as well as the need for easements on, or land conveyances of, Forest lands for community infrastructure, roads and energy corridors. These topics are incorporated in the ongoing Forest Plan revision process.		